1957 INDEX

Petroleum Processing

VOLUME 12

JANUARY – SEPTEMBER 1957

McGRAW-HILL PUBLISHING CO., INC.
330 WEST 42nd STREET
NEW YORK 36, NEW YORK

SUBJECT INDEX

A

ACCIDENTS (see SAFETY)

ACETYLENE
Acetylene; Peter W. Sherwood June 88

ACRYLONITRILE
Acrylonitrile and Hydrogen Cyanide (Pat) Aug. 107

AIR POLLUTION (see WASTE DISPOSAL)

ALKYLATION
Alkylation Problems Apr. 82
Alkylation Unit (Tidewater Delaware Refinery); S. R. Stiles July 114
HF Alkylation—Phillips (PDS) Aug. 77
H_2SO_4 Alkylation—Kellogg (PDS) Apr. 107

ALLOYS (see STEEL)

AMERICAN OIL COMPANY
Amoco's Latest—Built for High Yields May 216

AMERICAN PETROLEUM INSTITUTE
API Annual Committee Reports Apr. 68
API Committee on Analytical Research; C. C. Tate Apr. 68
API Committee on Automotive Research; W. J. Sweeney Apr. 68
API Committee on Petroleum Products; L. C. Beard, Jr. Apr. 71
API Committee on Refinery Equipment; John C. Ducommun Apr. 72
API Committee on Refinery Wastes; R. M. Landon Apr. 69
API Committee on Smoke and Fumes; G. R. Lake Apr. 71
API Committee on Training; J. J. Stadtherr Apr. 70
API Mid-Year Meeting Program Apr. 73
New Vice President for Refining (Harry W. Ferguson) Jan. 75
PETROLEUM PROCESSING's 1957 Report on the API Division of Refining Apr. 67

AMMONIA
Ammonia—Future Looks Promising; Richard F. Messing and Samuel Perkins Sept. 108
Granular Ammonium Nitrate (Stengel-C&I process) (PDS) Sept. 171

ANALYSIS
A New Crude Oil Quality Index; David Rothbard Jan. 68
Aromatics—Fuels and Chemicals Boost BTX's; Harold Edward Bramson-Cook Sept. 109

ANALYZERS
How one shop takes care of stream analyzers (PP) Aug. 86

ASPHALT
The Asphalt Debate Is On June 65
Asphalt hydrogenation seen as new sources for light products (T) Apr. 15
Better Asphalt for Road Program (Pat) March 153
For Better Asphalts, Try Continuous Automatic Blending Jan. 41
Is Asphalt Losing by Default? (Ed) Jan. 166
Surge Ahead For Asphalt; V. B. Guthrie and W. A. Bussard Jan. 39
31 Asphalt Grades and Their Specifications Jan. 43

ASSOCIATIONS (see also specific names)
What? another society? Yes! and this one means business! (T) March 15

ATMOSPHERIC POLLUTION (see WASTE DISPOSAL)

ATOMIC DEVELOPMENTS (see RADIOACTIVITY)

AUTOMOTIVE DEVELOPMENTS
Automotive accessories to keep on gobbling horsepower (T) June 15
Fuel Injection—Will it bring new gasoline patterns?; V. B. Guthrie March 59

AVIATION FUELS (see JET FUELS)

B

BLENDING
For Better Asphalts, Try Continuous Automatic Blending Jan. 41
Products Blending (Tidewater Delaware Refinery); William F. Bland July 142

BOOK REVIEWS
How To Use Written Information March 161
Legal Problems in Engineering; Melvin Nord Jan. 101
Maintenance Engineering Handbook July 221

BULL PEN, THE
Cruse Blows His Fuse Sept. 183
Frenchy, the Crawfish, and Me March 129
How the Old Man Put Gravity to Work for Him June 127
How the Old Man Turned Sand Into Steam May 249
How to Keep the "Wheels" Turning Aug. 91
Mind Over Matter Apr. 117
Murphy's Laws Mean Trouble July 191
Strictly Psychological Feb. 117
Teaching an Old Dog New Tricks Jan. 91

BUTADIENE
Butadiene Plant Makes Big News Aug. 67
Butadiene; Supply-Demand now in Balance; D. Eugene Norris Sept. 110
Will Butadiene Become a Refiner's Product (T) Sept. 16

BUTANE (see NATURAL GAS LIQUIDS)

C

CAPACITY (see DIRECTORIES)

CARBON BLACK
Carbon Black—Foreign Markets Growing Fastest; Gordon B. Heath Sept. 110

CARBON STEEL (see STEEL)

CATALYSTS
New Type Catalysts Studied For Hydrogen Processing (T) Jan. 15

CATALYTIC CRACKING (see CRACKING)

CATALYTIC REFORMING (see REFORMING)

CHEMICALS (see PETROCHEMICALS and specific chemicals)

CLAY
What to do with Spent Clay?; G. F. Felton Sept. 160

CLEANING (see MAINTENANCE)

COKING
Fluid Coker (Tidewater Delaware Refinery); R. L. Davidson July 106
This Month's Technical Tips on . . . Distillation, Thermal Cracking & Coking Problems May 233

COMPANIES (see PLANTS DESCRIBED and also specific company names)

COMPRESSORS
Compressors Modernized with Nodular Iron (PP) Apr. 115

COMPUTERS
Are policy-making computers just around the corner? Aug. 15
Machine translation of language now a step closer (T) Sept. 16
The frigid digit is coming—cold computers to do hot jobs (T) May 15

CONSTRUCTION
A Cool Foundation for a Hot Coker (PP) Feb. 113
Air Mapping of Tidewater Site (Tidewater Delaware Refinery Sept. 162
Construction (Tidewater Delaware Refinery); W. A. Bussard July 159
Models Simplify and Cut Costs of Big Revamp Job; Ron Cannon Aug. 48
Site Selection (Tidewater Delaware Refinery); V. B. Guthrie July 162
Soil Studies (Tidewater Delaware Refinery); V. B. Guthrie July 163

CONTROL SYSTEMS
Automatic Control Comes to the Batch Process; Harry B. Breedlove May 220

COOLING TOWERS
Dual Drive Gives Flexible Cooling (PP) March 123
How Repair and Double Diffusion Treatment Saved a Cooling Tower; Loren L. Crowl Apr. 86
Spray treatment prolongs life of cooling towers (PP) July 189

COOLING WATER (see WATER)

COSDEN PETROLEUM CORP.
Cosden's Styrene Unit—They Said It Couldn't Be Built; Ron Cannon May 226

COST CONTROL
What? another society? . . . Yes! and this one means business! (T) March 15

CRACKING
Catalytic Cracking Problems Feb. 78
Cracking Unit (Tidewater Delaware Refinery); L. F. Rice July 108
Technical Tips on Catalytic Cracking Problems March 63
This Month's Technical Tips on . . . Distillation, Thermal Cracking and Coking Problems May 233

CRESYLICS
Cresylics; Demand Waits for Supply; Joseph Pursglove, Jr. Sept. 111

CRUDE OIL
Fossil fuels seen continuing as important energy sources (T) July 15
A New Crude Oil Quality Index; David Rothbard Jan. 68

CUMENE
Cumene—Mid-Century Process (PDS) July 181

D

DEHYDROGENATION
What route to higher octanes—

isomerize or dehydrogenate? (T) June 15

DEMAND
Mid-Year Supply-Demand Outlook; Virgil B. Guthrie June 78
Petrochemicals Gain in 1957; R. L. Bateman Sept. 108
Petrochemical potentials in new consumer products (T) Apr. 16
Petrochemicals Race Ahead; Henry G. McGrath Sept. 101

DESIGN DATA
Combustible Vapors (EDS) March 139
"Design Models Are Here to Stay"; Harold Kershaw May 222
How Photo-drawings Work with Models; T. S. Tucker Apr. 94
How and Why It Pays to Build Design Models; W. A. Bussard Apr. 90
Low-Finned Exchanger Tubing (part 1); R. G. Newell Feb. 71
Low-Finned Exchanger Tubing (Part 2); Robert G. Newell March 86
Low-Finned Exchanger Tubing (Part 3); R. G. Newell Apr. 77
Thermodynamic Properties of Pure & Mixed Hydrocarbons; Merk Hobson & James Weber —Part 1 Aug. 43
Thermodynamic Properties of Pure & Mixed Hydrocarbons; Merk Hobson & James Weber —Part 2 Sept. 153
Unfired Pressure Vessels—carbon steel & stainless steel shells; Robert Chuse (EDS) Sept. 193
Unfired Pressure Vessels—Code simplification (EDS) July 195

DESULFURIZATION
Desulfurizing Unit (Tidewater Delaware Refinery); D. P. Thornton, Jr. July 118

DETERGENTS
Synthetic Detergents—Grow at Soaps' Expense; Foster D. Snell Sept. 114

DIRECTORIES
1957 Refinery Directory of United States & Canada May 81
Petrochemical Industry—1957—A 300% Increase in Six Years Sept. 121
Which Plants Make What Petrochemicals . . . plus brief descriptions of over 350 petrochemicals Sept. 139
Who's Who in Petrochemical Engineering Service Firms Sept. 149
Who's Who in Refinery Service Firms May 150

DISTILLATION (see FRACTIONATION)

E

ECONOMICS
The Asphalt Debate Is On June 65
Big Business Isn't Bad Business (Ed) Feb. 188
LPG—Largest Petroleum Growth Feb. 69
Mid-Year Supply-Demand Outlook; Virgil B. Guthrie June 78
Money isn't Everything—But (Ed) Apr. 184
Petrochemical Industry-1957—A 300% Increase in Six Years Sept. 121
Petrochemicals Gain in 1957; R. L. Bateman Sept. 108
Petrochemicals Race Ahead; Henry G. McGrath Sept. 101
Pneumatic Control—In Cash; E. I. Thomas Apr. 97
Processing Flexibility gets tougher Apr. 63
Spending Shifts To High Gear Feb. 87
Surge Ahead For Asphalt; V. B. Guthrie and W. A. Bussard Jan. 39

EDITORIALS
Big Business Isn't Bad Business Feb. 188
A Bird in the Hand March 204
Don't "Pasteurize" Brainpower June 192
Fertilize Your Own Grass May 314
First in a New Generation July 264
Is Asphalt Losing by Default? Jan 166
Money Isn't Everything—But Apr. 184
Now They Bark; Next They'll Bite Feb. 188
Why Wait for Anti-pollution Laws? Aug. 152

ELECTRICAL EQUIPMENT
Electrical System (Tidewater Delaware Refinery); W. A. Bussard July 130
Join Cable by Squeezing, Not Soldering (PP) Feb. 114
Power Plant (Tidewater Delaware Refinery); W. A. Bussard July 132
RP-500—What it Means and How To Use It Feb. 82

EMPLOYEE RELATIONS (see PERSONNEL)

ENGINEERING COMPANIES
Who's Who in Petrochemical Engineering Service Firms Sept. 149
Who's Who in Refinery Service Firms May 150

ENGINEERING DATA SHEETS
Combustible Vapors March 139
Instrument Terminology (A-F) Apr. 121
Instrument Terminology (G-P) May 253
Instrument Terminology (R-Z) June 131
Plastics, Clossary of (A-L) Jan. 103
Plastics, Glossary of (M-Z) Feb. 129
Unfired Pressure Vessels—Carbon steel & stainless steel shells; Robert Chuse Sept. 193
Unfired Pressure Vessels—Code simplification July 195
Wire Rope Aug. 99

ETHYLENE
Ethylene from oil gas could be both cheap and efficient (T) Aug. 16
Ethylene; Still a Booming Product; R. F. McCleary & John J. Glover Sept. 112

EQUIPMENT (see specific types)

EXCHANGERS (see HEAT EXCHANGERS)

F

FIRE PROTECTION (see SAFETY)

FIRST AID (see SAFETY)

FORMALDEHYDE
Formaldehyde—Capacity Exceeds Demand; T. G. Davis Sept. 113

FRACTIONATION
Crude Unit (Tidewater Delaware Refinery); W. E. Colburn July 104
Fractionation Your Problem? Jan. 58

FUEL INJECTION
Fuel Injection—Will it bring new gasoline patterns?; V. B. Guthrie March 59

FUEL OIL
Heart of New Fuel Oil Stability Test is Time-temperature Chart; Daniel Milsom and A. R. Rescorla Feb. 95
Predict Fuel Oil Stabilities—New Optical Method is Fast, Efficient; W. H. Armstrong, D. Milsom, H. P. Hebert, A. R. Rescorla Feb. 88

FUELS (also see specific types)
1958 to be year of the borane fuels for military aircraft (T) Aug. 16

CODE for Regular Departments:

BR—Book Reviews
Ed—Editorials
EDS—Engineering Data Sheets
Pat—Patents
PDS—Process Data Sheets
PP—Plant Practices
T—Tomorrow
W—Words

G

GAS LIQUIDS (see NATURAL GAS LIQUIDS)

GAS PLANTS
Gas Plant (Tidewater Delaware Refinery); H. A. Baird July 111

GASKETS (See PACKING)

GASOLINE
Coming: more accuracy in road octane ratings (T) Apr. 15
Fuel Injection—Will it bring new gasoline patterns?; V. B. Guthrie March 59
High octanes in motor fuel are not necessarily the answer (T) Aug. 15
100+ Octane after One Year; V. B. Guthrie Feb. 61

GASOLINE, NATURAL (see NATURAL GAS LIQUIDS)

H

HEAT EXCHANGERS
How to Clean Slurry Bundles; The M&C Problem Corner Jan. 63
Low-Finned Exchanger Tubing (part 1); R. G. Newell Feb. 71
Low-Finned Exchanger Tubing (Part 2); R. G. Newell March 86
Low-Finned Exchanger Tubing (Part 3); R. G. Newell Apr. 77

HYDROGEN
Hydrogen Plant (Tidewater Delaware Refinery); J. V. Class, Norman C. Updegraff July 116

HYDROGEN CYANIDE
Acrylonitrile and Hydrogen Cyanide (Pat) Aug. 107

HYDROGEN PROCESSING
New Type Catalysts Studied For Hydrogen Processing (T) Jan. 15

HYDROGENATION
Asphalt hydrogenation seen as new sources for light products (T) Apr. 15

I & J

INDUSTRIAL RELATIONS (see PERSONNEL)

INSTRUMENTATION
Automatic Control Comes to the Batch Process; Harry B. Breedlove May 220
Coming in Instrumentation—Much Needed Basic Research (T) Jan. 16
Instrumentation (Tidewater Delaware Refinery); R. L. Davidson July 148
Pneumatic Control—In Cash; E. I. Thomas Apr. 97

INSTRUMENTS
How to Unplug Orifice Taps; James W. Ross (PP) March 123
Instrument Terminology (A-F). (EDS) Apr. 121
Instrument Terminology (G-P) (EDS) May 253
Instrument Terminology (R-Z) (EDS) June 131
Need a Better Instrument Pen? (PP) March 126
New Instruments for High Pressure; W. Adamson Jan. 52
Tips on Installing a Steam Pressure Regulator Station (PP) Feb. 113
Tomorrow's Instrument Repairman . . . What Training Will He Need?; A. P. Olbrich, C. H. Trotter June 80

INSULATION
Insulate with both feet on the ground (PP) June 124
Low Temperature Insulation; Ron Cannon June 97

ISOMERIZATION
New Isomerization Process Uses Low Pressures for High Conversion (Pat) Sept. 203
What route to higher octanes—isomerize or dehydrogenate? (T) June 15

JET FUELS
Next Jet Fuel—"Hydroborons" In Place of Hydrocarbons? (T) Jan. 15

L

LABORATORY EQUIPMENT
Capillary Device Aids in Accurate Short Samples; Warren W. Huss (LP) Jan. 93
Sodium Charging Lock Uses Magnet For Smooth Feeding; J. L. Boyd (LP) Jan. 93

LABORATORY PRACTICES
Capillary Device Aids in Accurate Short Samples; Warren W. Huss Jan. 93
Sodium Charging Lock Uses Magnet For Smooth Feeding; J. L. Boyd Jan. 93

LEAKS (see LOSSES)

LEGISLATION
Patent Law Changes? (Pat) March 155

LIQUEFIED PETROLEUM GAS (see NATURAL GAS LIQUIDS)

LOSSES
How to stop propane leaks (M&C) June 83

LUBRICANTS
Can lubricants be mined—as well as refined? (T) March 15

M

MAINTENANCE (also see CLEANING
Adopt an Area Foreman Plan; V. H. Wilks Feb. 64
Baton Rouge Gets Facelifting Jan. 45
Check list for gas-freeing tanks (PP) May 246
Chemical-cleaning Insoluble Deposits from Turbine Blades; The M&C Problem Corner March 77
Cleaning Turbine Blades; The M&C Problem Corner Apr. 89
Cooperative Relations . . . how they make for good maintenance; Roy W. Best March 75
Crane travels through flipper door (PP) Apr. 113
Design for Maintenance (Tidewater Delaware Refinery) July 154
Extra Pipe Spool Speeds Pump Maintenance (PP) March 126
Floor openings sealed with foam (PP) Aug. 84
How Repair and Double Diffusion Treatment Saved a Cooling Tower; Loren L. Crowl Apr. 86
How to Clean Slurry Bundles; The M&C Problem Corner Jan. 63
How to Remove Deposits from Steam Turbine Blades and Vacuum Ejectors, M&C Problem Corner Feb. 68
How to stop propane leaks; M&C Problem Corner June 83
How to Unplug Orifice Taps; James W. Ross (PP) March 123
How to stop propane leaks—M&C Problem Corner Aug. 52
Lube System Extends Packing Life (PP) Apr. 114
Maintenance (Tidewater Delaware Refinery); R. L. Davidson July 156
Maintenance Engineering Handbook (BR) July 221
Mind Over Matter (Bull Pen) Apr. 117
"Scamp" Shaker Speeds Up Turnaround (PP) Jan. 88
Special Manhole Aids Tank Cleaning; Frank J. Scheilbaum (PP) Jan. 88
Steel staging rides high (PP) July 187
Teaching an Old Dog New Tricks (Bull Pen) Jan. 91
This special jig permits in-place repair of valve seat (PP) May 245
Tips for tool handling at turnaround; E. B. Stricker (PP) June 123
Tomorrow's Instrument Repairman . . . What Training Will He Need?; A. P. Olbrich, C. H. Trotter June 80
TV in Machine Shop Saves Valuable Conditioned Air (PP) Jan. 87
Ultrasonics Seen as a New Aid to the Maintenance Men (T) Feb. 15
Why Full-Time Technical Studies of Maintenance Are Needed Now; V. J. Loyd Jan. 60

MANAGEMENT
Tomorrow's decision-makers may be playing games today (T) June 16

MANPOWER (See Personnel)

MATERIAL HANDLING
Crane travels through flipper door (PP) Apr. 113
Have trouble switching boxcars? (PP) May 246
Scrap equipment makes acid trailer (PP) June 124

METERS
How to Meter Highly Volatile Liquids; George E. Batchelder Aug. 70

MODELS
"Design Models Are Here to Stay"; Harold Kershaw May 222
How and Why It Pays to Build Design Models; W. A. Bussard Apr. 90
How Photo-drawings Work With Models; T. S. Tucker Apr. 94
Models Simplify and Cut Costs of Big Revamp Job; Ron Cannon Aug. 48

MOLYBDENUM DISULFIDE
Can lubricants be mined—as well as refined? (T) March 15

MOTOR FUELS (See GASOLINE)

N & O

NATURAL GAS LIQUIDS
LPG—Largest Petroleum Growth Feb. 69
"Marginal Operation" Pays Off in Trend-setting Lean-gas Plant; Ron Cannon Aug. 62

NITRIC ACID
Nitric Acid—Chemico Process (PDS) March 117

OCTANES
Coming: more accuracy in road octane ratings (T) Apr. 15
High octanes in motor fuel are not necessarily the answer (T) Aug. 15
100+ Octane after One Year; V. B. Guthrie Feb. 61
What route to higher octanes—isomerize or dehydrogenate? (T) June 15
What Sulfur Means to 100-Octane Fuels; G. H. Unzelman June 70

OIL (see CRUDE OIL)

OIL SHALE (see SYNTHETIC FUELS)

P

PACKING
Gaskets (a Special Report); Ron Cannon March 95

PATENTS
Acrylonitrile and Hydrogen Cyanide Aug. 107
Better Asphalt for Road Program March 153
Better cat reforming May 265
Congress slowdown stymied patent progress Aug. 107
Ethylene Oxide from Ethane March 153
Goodrich's Ameripol SN July 211
H_2SO_4 Alkylation—Kellogg Apr. 107
How Do You Rate in the Patent Race? March 153
"Impurities" help make ethyl chloride June 143
Mercury Vapor Improves Cat Reformate Apr. 137
More dollars for patent examiner? May 265
New Isomerization Process Uses Low Pressures for High Conversion Sept. 203
No more patent stalling? June 143
Patent Law Changes? March 155
Patent Office needs patent examiners Aug. 107
Patents in months instead of years? May 265
Recovering Oil from Sand Deposits Feb. 137
Selling a Patent? Consider Capital Gains Apr. 137
Senate bill pushes single court of patent appeals June 143
Shell Wins TCP Case March 153
Two-Stage Catalytic Reforming Process Gives High Gasoline Yields and Octanes Jan. 115
Want to be a commissioner? June 143
Waste water purification May 265
Xylene isomerization May 265

PERSONAL DEVELOPMENT
Do Your Ideas Get Across?; Stuart D. Boynton Aug. 53
How to Give a Technical Talk? William Cullen Bryant, II Feb. 84
How Well Do **You** Write?; Stuart D. Boynton Apr. 75
Selling a Patent? Consider Capital Gains (Pat) Apr. 137
What Do Oilmen Want in the Technical Man (Besides Ability)?; Stuart D. Boynton Jan. 66

PERSONNEL
A Bird in the Hand (Ed) March 204
Don't "pasteurize" brainpower (Ed) June 192
Fertilize your own grass . . . Solving the Technical Manpower Shortage (Ed) May 314
Hiring, Training (Tidewater Delaware Refinery); S. D. Boynton July 166
Money isn't Everything—But (Ed) Apr. 184
Organization (Tidewater Delaware Refinery) July 164
Tomorrow's Instrument Repairman . . . What Training Will He Need?; A. P. Olbrich, C. H. Trotter June 80

PETROCHEMICALS
(also see specific products)
Acetic Acid (W) Feb. 119
Acetylene; Peter W. Sherwood June 88
Acetone (W) May 251
Acrylic Acid (W) March 131
Acrylonitrile and Hydrogen Cyanide (Pat) Aug. 107
Ammonia—Future Looks Promising; Richard F. Messing and Samuel Sept. 108
Ammonium Nitrate Production (PDS) Feb. 109
Aromatics—Fuels and Chemicals Boost BTX's; Harold Edward Bramston-Cook Sept. 109
Butadiene Plant Makes Big News Aug. 67
Butadiene; Supply-Demand Now in Balance; D. Eugene Norris Sept. 110
Butyl Rubber (W) Apr. 119
Carbon Black—Foreign Markets Growing Fastest; Gordon B. Heath. Sept. 110
Carbon Monoxide (W) Aug. 93
Cosden's Styrene Unit—They Said It Couldn't Be Built; Ron Cannon May 226

Cresylics; Demand Waits for Supply; Joseph Pursglove, Jr. Sept. 000
Cumene-Mid-Century Process (PDS) July 181
Dibutyl Phthalate (W) Jan. 99
Diisobutylene (W) Apr. 119
Ethyl Chloride (W) Feb. 119
Ethylene Oxide from Ethane (Pat) March 153
Ethylene; Still a Booming Product; R. F. McCleary & John J. Glover Sept. 112
Formaldehyde—Capacity Exceeds Demand; T. G. Davis Sept. 113
Hydrogen Cyanide (W) Jan. 99
"Impurities" help make ethyl chloride (Pat) June 143
Ispropanol (W) Aug. 93
Methyl Butynol (W) July 193
Methyl Cyclopentadienyl Manganese Tricarbonyl Sept. 187
Morpholine (W) Sept. 187
Naphthalene (W) May 251
New Liquid-Phase Process Makes Many Oxidized Aromatics Products (T) Jan. 16
Petrochemical Industry-1957—A 300% Increase in Six Years Sept. 121
Petrochemical potentials in new consumer products (T) Apr. 16
Petrochemicals Gain in 1957; R. L. Bateman Sept. 108
Petrochemicals Race Ahead; Henry G. McGrath Sept. 101
Polycarbonates (W) June 129
Polyethylene—Dynamic Growth Continues; George Wash Sept. 115
Polypropylene—A Bright Future Waiting; Mario L. Ottolenghi Sept. 114
Shale oil again seen possible source of petrochemicals (T) June 16
Shell Wins TCP Case (Pat) March 153
Silicone Polymers (W) June 129
Styrene (W) July 193
Sulfur; Capacity May Double by 1962; Sam S. Emison Sept. 117
Styrene—Price Down, Supply-Demand Up; Elmer K. Stilbert Sept. 116
Synthetic Detergents—Grow at Soaps' Expense; Foster D. Snell Sept. 114
Synthetic Fibers—Sales Going Up Fast; Frank J. Soday Sept. 118
Synthetic Rubber—Slow Now, but Rise Is Coming; John T. Cox, Jr. Sept. 119
Toylene Diisocyanate (W) March 131
Tomorrow's moneymakers—reformer-made solvents (T) May 16
Urethanes—Market Grows for Foam; William H. Ayscue Sept. 119
Which Plants Make What Petrochemicals . . . plus brief descriptions of over 350 petrochemicals Sept. 139
Who's Who in Petrochemical Engineering Service Firms Sept. 149
Will Butadiene Become a Refiner's Product (T) Sept. 16
Xylene isomerization (Pat) May 265

PHILADELPHIA
893,500 b/d This Year, and Still Growing (the Delaware Valley); Stuart D. Boynton March 79

PLANTS DESCRIBED
American Oil Co., Yorktown, Va.; Amoco's Latest—Built for High Yields May 216
Cosden Petroleum Corp., Big Spring, Texas; Cosden's Styrene Unit—They Said It Couldn't Be Built; Ron Cannon May 226
Murray Mid-continent Red Fish Bay Gas Products Plant, Corpus Christi, Texas; "Marginal Operation" Pays Off in Trend-setting Lean-gas Plant; Ron Cannon Aug. 62
Texas Butadiene & Chemical Corp., Houston, Tex.; Butadiene Plant Makes Big News Aug. 67
Tidewater Oil Company, Delaware City, Delaware; The Complete Technical Story of the World's Most Modern Refinery—Tidewater; William F. Bland July 99

PLANT MAINTENANCE (see MAINTENANCE)

PLANT OPERATIONS
Alkylation Problems Apr. 82
Dual Drive Gives Flexible Cooling (PP) March 123
One Cooling Box for Three Samples (PP) Apr. 113
Processing Flexibility gets tougher Apr. 63
Technical Tips on Catalytic Cracking Problems March 63
This Month's Technical Tips on . . . Distillation, Thermal Cracking and Coking Problems May 233
Truck-lab Speeds Field Analysis (PP) Apr. 114

PLANT PRACTICES
Company insignia—indian style July 188
A Cool Foundation for a Hot Coker Feb. 113
Check list for gas-freeing tanks May 246
Compressors Modernized with Nodular Iron Apr. 115
Cooling temperatures kept constant Sept. 177
Crane travels through flipper door Apr. 113
Custom designed stool June 125
Dual Drive Gives Flexible Cooling March 123
Extra Pipe Spool Speeds Pump Maintenance March 126
Floor openings sealed with foam Aug. 84
Foot Valve Averts Turbine Runaway March 124
Have trouble switching box-cars? May 246
How one shop takes care of stream analyzers Aug. 86
How to Unplug Orifice Taps; James W. Ross March 123
How to Prevent Vapor Lock Feb. 114
Hydraulic system controls butadiene reactor product valves July 187
Insulate with both feet on the ground June 124
Join Cable by Squeezing, Not Soldering Feb. 114
Keeping a card file on your pumps? Aug. 83
Lube System Extends Packing Life Apr. 114
Mixer gives constant pressure drop Sept. 177
Need a Better Instrument Pen? March 126
One Cooling Box for Three Samples Apr. 113
Parka turns winter into summer Sept. 177
Rubber walkways last longer Sept. 177
Scrap equipment makes acid trailer June 124
"Scrap" Shaker Speeds Up Turnaround Jan. 88
Slope eliminates separate retaining walls Aug. 83
Special Manhole Aids Tank Cleaning; Frank J. Scheilbaum Jan. 88
Special testers keep tools in top condition; D. I. Gantz July 177
Spray treatment prolongs life of cooling towers July 189
Steel staging rides high July 187
This special jig permits In-place repair of valve seat May 245
Tips for tool handling at turnaround; E. B. Stricker June 123
Tips on Installing a Steam Pressure Regulator Station Feb. 113
Truck-lab Speeds Field Analysis Apr. 114
TV in Machine Shop Saves Valuable Conditioned Air Jan. 87
Video checks refinery employes May 245

PLANT PROTECTION (see SAFETY)

PLASTICS
Better fluorine plastics may result from current studies (T) July 15
Plastics, Glossary of (A-L) (EDS) Jan. 103
Plastics, Glossary of (M-Z) (EDS) Feb. 129
Plastics in home building loom large on future horizon (T) July 15
Use plastic for Acid Handling Sept. 158

POLLUTION CONTROL (see WASTE DISPOSAL)

POLYETHYLENE
Irradiation may be answer to polyethylene's heat limits (T) March 16
Polyethylene—Dynamic Growth Continues; George Wash Sept. 115

POLYMERIZATION
Cat Poly Unit (Tidewater Delaware Refinery); D. P. Thornton, Jr. July 112
Polypropylene—A Bright Future Waiting; Mario L. Ottolenghi Sept. 114

POWER SUPPLY
Power Plant (Tidewater Delaware Refinery); W. A. Bussard July 132

PROCESS DATA SHEETS
Ammonium Nitrate Production Feb. 109
Cumene—Mid-Century Process July 181
Granular Ammonium Nitrate (Stengel-C&I process) Sept. 171
HF Alkylation—Phillips Aug. 77
Nitric Acid—Chemico Process March 117
Powerforming June 117
Process Index—1954 May 239
Process Reference List—1956 Jan. 83
Sulfuric Acid Alkylation—Kellogg Apr. 107

PROCESSES (also see specific ones)
Overall Process (Tidewater Delaware Refinery); T. H. Anderson July 102
Refining Process Glossary; George H. Unzelman & Charles J. Wolf May 97

PRODUCTS (see specific ones)

PROPANE (see NATURAL GAS LIQUIDS)

PUBLIC RELATIONS
Community Relations (Tidewater Delaware Refinery); V. B. Guthrie July 170

PUBLIC SPEAKING
How to Give a Technical Talk; William Cullen Bryant, II Feb. 84

PUMPS
Extra Pipe Spool Speeds Pump Maintenance (PP) March 126
Keeping a card file on your pumps? (PP) Aug. 83
How to Prevent Vapor Lock (PP) Feb. 114
Lube System Extends Packing Life (PP) Apr. 114

CODE for Regular Departments:

BR—Book Reviews
Ed—Editorials
EDS—Engineering Data Sheets
Pat—Patents
PDS—Process Data Sheets
PP—Plant Practices
T—Tomorrow
W—Words

R

RADIOACTIVITY
Fast electrons from Van de-Graaf "catalyze" bromination of toluene (T) March 16
Going into Radioactivity? Answer these Nine Questions First; Robert G. Gallaghar March 68
Irradiation may be answer to polyethylene's heat limits (T) March 16
Radiation's Future in Petroleum Needs a Strong Safety Program (T) Feb. 16
Radioisotopes; Stuart D. Boyton Aug. 55

Radioisotopes in refineries: a look into the future (T) Sept. 15

REFINERIES
1957 Refinery Directory—U. S. & Canada May 81

REFORMING
Better cat reforming (Pat) May 265
Catalytic Reformer (Tidewater Delaware Refinery); E. A. White, Jr. July 122
Extraction Unit (Tidewater Delaware Refinery); D. P. Thornton, Jr. July 125
Mercury Vapor Improves Cat Reformate (Pat) Apr. 137
New Mexico's First Cat Reformer, How It Works on a Mixed Feed Jan. 64
Powerforming (PDS) June 117
This Month's technical tips on . . . Catalytic Reforming Problems June 84
This month's technical tips on . . . Catalytic Reforming Problems Aug. 59
Two-Stage Catalytic Reforming Process Gives High Gasoline Yields and Octanes (Pat) Jan. 115

REPAIRS (see MAINTENANCE)

RESEARCH
Do birds of a feather make better committee members? (T) Apr. 16

RUBBER (see SYNTHETIC RUBBER)

S

SAFETY
Check list for gas-freeing tanks (PP) May 246
Combustible Vapors (EDS) March 139
Foot Valve Averts Turbine Runaway (PP) March 124
Guard Protection by Contract—a First (Tidewater Delaware Refinery); Alan Corneretto July 169
Protection (Tidewater Delaware Refinery); L. C. Johns July 168
Radiation's Future in Petroleum Needs a Strong Safety Program (T) Feb. 16
Use Plastic for Acid Handling Sept. 158
What Are the Limitations of Vapor Testers?—Willis A. Bussard May 228
Will we fight fire, radioactivity by remote control tomorrow? (T) July 16

SEALS (see PACKING)

SHALE OIL (see SYNTHETIC FUELS)

SHIPPING
Marine Terminal (Tidewater Delaware Refinery); V. B. Guthrie July 146

SMOG (see WASTE DISPOSAL)

SPECIFICATIONS (also see STANDARDS)
31 Asphalt Grades and Their Specifications Jan. 43

STANDARDS (also see SPECIFICATIONS)
RP-500—What it Means and How To Use It Feb. 82

STATISTICS
893,500 b/d This Year, and Still Growing (the Delaware Valley); Stuart D. Boynton March 79

STEEL
Metallurgy (Tidewater Delaware Refinery); W. A. Bussard July 152
New "Plastic" Theory of Steel May Replace Elastic Design Idea (T) Feb. 15
Unfired Pressure Vessels—carbon steel & stainless steel shells; Robert Chuse (EDS) Sept. 193

STORAGE
Petroleum goes back underground as subterranean storage spreads (T) Apr. 15

STORAGE TANKS (see TANKS)

STYRENE
Styrene—Price Down, Supply-Demand Up; Elmer K. Stilbert Sept. 116

SULFUR (also see DESULFURIZATION)
Sulfur; Capacity May Double by 1962; Sam E. Emison Sept. 117
Sulfur Recovery (Tidewater Delaware Refinery); R. E. Goodman July 127
What Sulfur means to 100-Octane Fuels: G. H. Unzelman June 70

SULFURIC ACID ALKYLATION (see ALKYLATION)

SWEETENING (also see DESULFURIZATION)
Better Inhibitor Sweetening; L. D. Rampino and M. J. Gorham Jan. 46

SYNTHETIC DETERGENTS (see DETERGENTS)

SYNTHETIC FIBERS
Synthetic Fibers—Sales Going Up Fast; Frank J. Soday Sept. 118

SYNTHETIC FUELS
Shale oil again seen possible source of petrochemicals (T) June 16

SYNTHETIC RUBBER
Butyl Rubber (W) April 119
Goodrich's Ameripol SN (Pat) July 211
Synthetic Rubber; Slow now, but Rise is Coming; John T. Cox, Jr. Sept. 119

T

TANKS
Check list for gas-freeing tanks (PP) May 246
Petroleum goes back underground as subterranean storage spreads (T) Apr. 15
Special Manhole Aids Tank Cleaning: Frank J. Scheilbaum (PP) Jan. 88
Tankage (Tidewater Delaware Refinery) W. F. Bland July 144
Slope eliminates separate retaining walls (PP) Aug. 83

TAR SANDS
Recovering Oil from Sand Deposits (Pat) Feb. 137

TELEVISION
"Miss Jones, take a TV message" (T) May 15
TV in Machine Shop Saves Valuable Conditioned Air (PP) Jan. 87
Video checks refinery employes (PP) May 245

TEST METHODS
Heart of New Fuel Oil Stability Test is Time-temperature Chart; Daniel Milsom and A. R. Rescorla Feb. 95
Predict Fuel Oil Stabilities—New Optical Method is Fast, Efficient; W. H. Armstrong, D. Milsom, H. P. Hebert, A. R. Rescorla Feb. 88

TESTING (see ANALYSIS)

TESTING EQUIPMENT
What Are the Limitations of Vapor Testers?—Willis A. Bussard May 228

THERMAL CRACKING (see CRACKING)

TIDEWATER OIL CO., Delaware Refinery
Air Mapping of Tidewater Site Sept. 162
Alkylation Unit; S. R. Stiles July 114
Cat Poly Unit; D. P. Thornton, Jr. July 112
Catalytic Reformer; E. A. White, Jr. July 122
Community Relations; V. B. Guthrie July 170
Construction; W. A. Bussard July 159
Cracking Unit; L. F. Rice July 108
Crude Unit; W. E. Colburn July 104
Design for Maintenance July 154
Desulfurizing Unit; D. P. Thornton, Jr. July 118
Electrical System; W. A. Bussard July 130
Extraction Unit; D. P. Thornton, Jr. July 125
First in a New Generation (Ed) July 264
Fluid Coker; R. L. Davidson July 106
Gas Plant; H. A. Baird July 111
Guard Protection by Contract—a First; Alan Corneretto July 169
Hiring, Training; S. D. Boynton July 166
Hydrogen Plant; J. V. Class, Norman C. Updegraff July 116
Instrumentation; R. L. Davidson July 148
Maintenance; R. L. Davidson July 156
Marine Terminal; V. B. Guthrie July 146
Metallurgy; W. A. Bussard July 152
Organization July 164
Overall Process; T. H. Anderson July 102
Power Plant; W. A. Bussard July 132
Products Blending; William F. Bland July 142
Protection; L. C. Johns July 168
Site Selection; V. B. Guthrie July 162
Soil Studies; V. B. Guthrie July 163
Solutizer; J. A. Samaniego July 128
Sulfur Recovery; R. E. Goodman July 127
Tankage; William F. Bland July 144
Waste Disposal; William C. Uhl July 138
Water Supply; William C. Uhl July 134

TOMORROW IN PETROLEUM TECHNOLOGY
Are policy-making computers just around the corner? Aug. 15
Asphalt hydrogenation seen as new source for light products Apr. 15
Automotive accessories to keep on gobbling horsepower June 15
Better fluorine plastics may result from current studies July 15
Can lubricants be mined—as well as refined? March 15
Coming in Instrumentation—Much Needed Basic Research Jan. 16
Coming: more accuracy in road octane ratings April 15
Do birds of a feather make better committee members? Apr. 16
Ethylene from oil gas could be both cheap and efficient Aug. 16
Fast electrons from Van de Graaff "catalyze" bromination of toluene March 16
Fossil fuels seen continuing as important energy sources July 15
The frigid digit is coming—cold computers to do hot jobs May 15
High octanes in motor fuel are not necessarily the answer Aug. 15
Irradiation may be answer to polyethylene's heat limits March 16
Machine Translation of Languages Now a Step Closer Sept. 16
"Miss Jones, take a TV message" May 15
New Liquid-Phase Process Makes Many Oxidized Aromatics Products Jan. 16
New "Plastic" Theory of Steel May Replace Elastic Design Idea Feb. 15
New Type Catalysts Studied For Hydrogen Processing Jan. 15
Next Jet Fuel—"Hydroborons" In Place of Hydrocarbons? Jan. 15
1958 to be year of the borane fuels for military aircraft Aug. 16
Petrochemical potentials in new consumer products Apr. 16
Petroleum goes back underground as subterranean storage spreads Apr. 15
Plastics in home building loom large on future horizon July 15
Radiation's Future in Petroleum Needs a Strong Safety Program Feb. 16
Radioisotopes in refineries: a look into the future (T) Sept 15
Science Will Help Us Do More Than Just Talk About Weather Feb. 16
Shale oil again seen possible source of petrochemicals June 16
Synthesis Gas from Cheap Coal Sept. 00
Tomorrow's decision-makers may be playing games today June 16

Tomorrow's moneymakers — reformer-made solvents ..... May 16
Ultrasonics Seen as a New Aid to the Maintenance Men ... Feb. 15
What? another society? . . . Yes! and this one means business! ..... March 15
What route to higher octanes—isomerize or dehydrogenate? June 15
Will Butadiene Become a Refiner's Product ..... Sept. 16
Will we fight fire, radioactivity by remote control tomorrow? July 16
You May Be Sending Your Wastes Down the Drain Tomorrow ..... Sept. 16

TOOLS
Special testers keep tools in top condition; D. I. Gantz (PP) Sept. 177
Tips for tool handling at turnaround; E. B. Stricker (PP) June 123

TOWERS, COOLING
(see COOLING TOWERS)
TRAINING (see PERSONNEL)
TREATING
Better Inhibitor Sweetening; L. D. Rampino and M. J. Gorham ..... Jan. 46
Solutizer (Tidewater Delaware Refinery); J. A. Samaniego July 128
Treating and Other Problems (WPRA) ..... Sept. 163

TUBING
Low-Finned Exchanger Tubing (Part 1); R. G. Newell ... Feb. 71
Low-Finned Exchanger Tubing (Part 2); Robert G. Newell March 86
Low-Finned Exchanger Tubing (Part 3); R. G. Newell ... Apr. 77

TURBINES
Chemical-cleaning Insoluble Deposits from Turbine Blades (M&C) ..... March 77
Cleaning Turbine Blades ... Apr. 89
Foot Valve Averts Turbine Runaway (PP) ..... March 124
How to Remove Deposits from Steam Turbine Blades and Vacuum Ejectors, M&C Problem Corner ..... Feb. 68

U, V, W, X

ULTRASONICS
Ultrasonics Seen as a New Aid to the Maintenance Men (T) ..... Feb. 15

URETHANES
Urethanes—Market Grows for Foam; William H. Ayscue ... Sept. 119

VALVES
Hydraulic system controls butadiene reactor product valves (PP) ..... July 187
This special jig permits Inplace repair of valve seat (PP) ..... May 245

VAPOR TESTERS
What Are the Limitations of Vapor Testers? — Willis A. Bussard ..... May 228

VESSELS
Unfired Pressure Vessels—carbon steel & stainless steel shells; Robert Chuse (EDS) Sept. 193
Unfired Pressure Vessels—Code simplification (EDS) ... July 195

WASTE DISPOSAL
Now they Bark; Next they'll Bite (Ed) ..... Feb. 188
Waste Disposal (Tidewater Delaware Refinery); William C. Uhl ..... July 138
Waste Water purification (Pat) May 265
What to do with Spent Clay?; G. F. Felton ..... Sept. 160
Why wait for anti-pollution laws? (Ed) ..... Aug. 152
You May Be Sending Your Wastes Down the Drain Tomorrow (T) ..... Sept. 16

WATER
Water Supply (Tidewater Delaware Refinery); William C. Uhl ..... July 134

WORDS
Acetic Acid ..... Feb. 119
Acetone ..... May 251
Acrylic Acid ..... March 131
Butyl Rubber ..... Apr. 119
Carbon Monoxide ..... Aug. 93
Dibutyl Phthalate ..... Jan. 99
Diisobutylene ..... Apr. 119
Ethyl Chloride ..... Feb. 119
Hydrogen Cyanide ..... Jan. 99
Isopropanol ..... Aug. 93
Methyl butynol ..... July 193
Methyl Cyclopentadienyl Manganese Tricarbonyl ..... Sept. 187
Morpholine ..... Sept. 187
Naphthalene ..... May 251
Polycarbonates ..... June 129
Silicone Polymers ..... June 129
Styrene ..... July 193
Tolylene Diisocyanate ..... March 131

XYLENE
Tomorrow's moneymakers — reformer-made solvents (T) ... May 16

AUTHOR INDEX

ADAMSON, W. — New Instruments for High Pressure ..... Jan. 52
ANDERSON, T. H. — Overall Process ..... July 102
ARMSTRONG, W. H. — Predict Fuel Oil Stabilities—New Optical Method is Fast, Efficient Feb. 88
AYSCUE, WILLIAM H.—Urethanes — Market Grows for Foam ..... Sept. 119
BAIRD, H. A.—Gas Plant ..... July 111
BATCHELDER, GEORGE E. — How to Meter Highly Volatile Liquids ..... Aug. 70
BATEMAN, R. L. — Petrochemicals Gain in 1957 ..... Sept. 108
BEARD, L. C. JR.; API Committee on Petroleum Products Apr. 71
BEST, ROY W. — Cooperative Relations ..... March 75
BLAND, WILLIAM F. — The Complete Technical Story of the World's Most Modern Refinery—Tidewater ..... July 99
BLAND, WILLIAM F. — Products Blending ..... July 142
BLAND, WILLIAM F. — Tankage ..... July 144
BOYD, J. L. — Sodium Charging Lock Uses Magnet for Smooth Feeding (LP) ..... Jan. 93
BOYNTON, STUART D. — Do Your Ideas Get Across? ..... Aug. 53
BOYNTON, STUART D. — 895,500 b/d This Year, and Still Growing ..... March 79
BOYNTON, S. D. — Hiring, Training ..... July 166
BOYNTON, STUART D.; How Well Do **You** Write? ..... Apr. 75
BOYNTON, STUART D. — Radioisotopes ..... Aug. 55
BOYNTON, STUART D. — What Do Oilmen Want in the Technical Man (Besides Ability)? ..... Jan. 66
BRAMSTON-COOK, HAROLD EDWARD — Aromatics — Fuels and Chemicals Boost BTX's Sept. 109
BREEDLOVE, HARRY B.—Automatic Control Comes to the Batch Process ..... May 220
BUSSARD, W. A. — Construction ..... July 159
BUSSARD, W. A. — Electrical System ..... July 130
BUSSARD, W. A.; How and Why It Pays to Build Design Models Apr. 90
BUSSARD, W. A. — Metallurgy July 152
BUSSARD, W. A. — Power Plant ..... July 132
BUSSARD, W. A. — Surge Ahead for Asphalt ..... Jan. 39
BUSSARD, W. A.—What Are the Limitations of Vapor Testers? May 228
CANNON, RON — Cosden's Styrene Unit — They Said It Couldn't Be Built ..... May 226
CANNON, RON — Gaskets ..... March 95
CANNON, RON — Low Temperature Insulation ..... June 97
CANNON, RON — "Marginal Operation" Pays off in Trend-setting Lean-gas Plant ..... Aug. 62
CANNON, RON — Models Simplify and Cut Costs of Big Revamp Job ..... Aug. 48
CHUSE, ROBERT — Unfired Pressure Vessels — carbon steel & stainless steel shells (EDS) Sept. 193
CLASS, J. V.—Hydrogen Plant ..... July 116
COLBURN, W. E. — Crude Unit July 104
CORNERETTO, ALAN—Guard Protection by Contract — A First ..... July 169
COX, JOHN T., JR. — Synthetic Rubber; Slow Now, but Rise is Coming ..... Sept. 119
CROWL, LOREN L.; How Repair and Double Diffusion Treatment Saved a Cooling Tower ..... Apr. 86
DAVIDSON, R. L. — Fluid Coker July 106
DAVIDSON, R. L. — Instrumentation ..... July 148
DAVIDSON, R. L. — Maintenance ..... July 156
DAVIS, T. G.—Formaldehyde—Capacity Exceeds Demand Sept. 113
DUCOMMUN, JOHN C; API Committee on Refinery Equipment ..... April 72
EMISON, SAM S. — Sulfur; Capacity May Double by 1962 Sept. 117
FELTON, G. F. — What to do with Spent Clay? ..... Sept. 160
GALLAGHAR, ROBERT G. — Going Into Radioactivity? Answer these Nine Questions First ..... March 68
GANTZ, D. I. — Special testers keep tools in top condition (PP) ..... Sept. 177
GLOVER, JOHN J. — Ethylene; Still a Booming Product Sept. 112
GOODMAN, R. E. — Sulfur Recovery ..... July 127
GORHAM, M. J. — Better Inhibitor Sweetening ..... Jan. 46
GUTHRIE, V. B. — Community Relations ..... July 170
GUTHRIE, V. B. — Fuel Injection—Will it bring new gasoline patterns? ..... March 59
GUTHRIE, V. B. — Marine Terminal ..... July 146
GUTHRIE, VIRGIL B. — Mid-Year Supply-Demand Outlook June 78
GUTHRIE, V. B. — 100+ Octane after One Year ..... Feb. 61
GUTHRIE, V. B. — Site Selection ..... July 162
GUTHRIE, V. B. — Soil Studies July 163
GUTHRIE, V. B. — Surge Ahead for Asphalt ..... Jan. 39
HEATH, GORDON B.—Carbon Black—Foreign Markets Growing Fastest ..... Sept. 110

1957 Index . . .

HEBERT, H. P. — Predict Fuel Oil Stabilities — New Optical Method is Fast, Efficient ... Feb. 88
HOBSON, MERK — Thermodynamic Properties of Pure & Mixed Hydrocarbons (Part 2) ... Sept. 153
HUSS, WARREN W. — Capillary Device Aids in Accurate Short Samples (LP) ... Jan. 93
JOHNS, L. C. — Protection ... July 168
KERSHAW, HAROLD — "Design Models Are Here to Stay" ... May 222
LAKE, G. R.; API Committee on Smoke and Fumes ... Apr. 71
LANDON, R. M.; API Committee on Refinery Wastes ... Apr. 69
LOYD, V. J. — Why Full-Time Technical Studies of Maintenance Are Needed Now ... Jan. 60
MC CLEARY, R. F. — Ethylene; Still a Booming Product ... Sept. 112
MCGRATH, HENRY G. — Petrochemicals Race Ahead ... Sept. 101
MESSING, RICHARD F., and Perkins, Samuel — Ammonia — Future Looks Promising ... Sept. 108
MILSOM, DANIEL—Heart of New Fuel Oil Stability Test is Time-temperature Chart ... Feb. 95
MILSOM, DANIEL — Predict Fuel Oil Stabilities — New Optical Method is Fast, Efficient ... Feb. 88
NEWELL, R. G. — Low-Finned Exchanger Tubing (Part 1) ... Feb. 71
NEWELL, ROBERT G. — Low-Finned Exchanger Tubing (Part 2) ... March 86
NEWELL, R. G.; Low-Finned Exchanger Tubing (Part 3) ... Apr. 77
NORRIS, D. EUGENE — Butadiene; Supply-Demand Now in Balance ... Sept. 110
OLBRICH, A. P. — Tomorrow's Instrument Repairman . . . What Training Will He Need? ... June 80
OTTOLENGHI, MARIO L.— Polypropylene—A Bright Future Waiting ... Sept. 114
PERKINS, SAMUEL, and Messing, Richard F.—Ammonia—Future Looks Promising ... Sept. 108
PURSGLOVE, JOSEPH, JR. — Cresylics; Demand Waits for Supply ... Sept. 111
RAMPINO, L. D. — Better Inhibitor Sweetening ... Jan. 46
RESCORLA, A. R. — Heart of New Fuel Oil Stability Test is Time-temperature Chart ... Feb. 95
RESCORLA, A. R. — Predict Fuel Oil Stabilities — New Optical Method is Fast, Efficient ... Feb. 88
RICE, L. F. — Cracking Unit ... July 108
ROSS, JAMES W. — How to Unplug Orifice Taps (PP) ... March 123
ROTHBARD, DAVID — A New Crude Oil Quality Index ... Jan. 68
SAMANIEGO, J. A. — Solutizer ... July 128
SCHEILBAUM, FRANK J. — Special Manhole Aids Tank Cleaning (PP) ... Jan. 88
SHERWOOD, PETER W. — Acetylene ... June 88
SNELL, FOSTER D.—Synthetic Detergents—Grow at Soaps' Expense ... Sept. 114
STADTHERR, J. J.; API Committee on Training ... Apr. 70
SODAY, FRANK J.—Synthetic Fibers—Sales Going Up Fast ... Sept. 118
STILBERT, ELMER K.—Styrene —Price Down, Supply-Demand Up ... Sept. 116
STILES, S. R. — Alkylation Unit ... July 114
STRICKER, E. B. — Tips for tool handling at turnarounds (PP) ... June 123
SWEENEY, W. J.; API Committee on Automotive Research ... Apr. 68
TATE, C. C.; API Committee on Analytical Research ... Apr. 68
THOMAS, E. I.; Pneumatic Control — In Cash ... Apr. 97
THORNTON, D. P. Jr.—Cat Joly Unit ... July 112
THORNTON, D. P., Jr. — Desulfurizing Unit ... July 118
THORNTON, D. P., Jr. — Extraction Unit ... July 125
TROTTER, C. H. — Tomorrow's Instrument Repairman . . . What Training Will He Need? ... June 80
TUCKER, T. S; How Photo-drawings Work With Models ... Apr. 94
UHL, WILLIAM C. — Waste Disposal ... July 138
UHL, WILLIAM C. — Water Supply ... July 134
UNZELMAN, GEORGE H. — Refining Process Glossary ... May 97
UNZELMAN, G. H. — What Sulfur Means to 100-Octane Fuels ... June 70
UPDEGRAFF, NORMAN C. — Hydrogen Plant ... July 116
WASH, GEORGE — Polyethylene —Dynamic Growth Continues ... Sept. 115
WEBER, JAMES — Thermodynamic Properties of Pure & Mixed Hydrocarbons (Part 2) ... Sept. 153
WHITE, E. A., JR. — Catalytic Reformer ... July 122
WILKS, H. V. — Adopt an Area Foreman Plan ... Feb. 64
WOLF, CHARLES J. — Refining Process Glossary ... May 97